

GAATTCCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGGCCGGACAGACCTCC
TTTGGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCCATCGAGCGCAGGATCTGCTGTCCCAT
GGGACAGCAGATCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCCCTGCTTCCAGTG
CTCCAGGTGGCCCAACCAGGCCAGGCACCCCAGGACCAGCCCCTGTGGACACTTTTGGAGCAGT
ACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACCTACTGCAACACGACCTTGGA
CCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCCCTAGTAGAGAGACCGTGCCCCGAG
TACTTCAATGGCATCAAGTACAACACGACCCGGAATGCCTACAGAGAGTGCCTGGAGAACGGGA
CCTGGGCCCTCAAGGGTCAACTACTCACACTGCGAACCCATTTTGGATGACAAGCAGAGAAAGTA
TGACCTGCATTACCGAATCGCCCTCATTGTCAACTACCTGGGTCACTGTGTTTTCCGTGGTGGCC
CTGGTGGCCGCTTTTCTGCTTTTCCCTAGTGCTGCGGAGTATCCGCTGCCTGAGGAATGTGATCC
ACTGGAACCTCATCACCACCTTCATTCTGAGAAACATCGCGTGGTTCCCTGCTGCAACTCATCGA
CCACGAAGTGCACGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTT
GTGGTCACCAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTCATGA
CGTACTCCACAGAGCACCTGCGCAAGTGGCTTTTCTCTTCATTGGATGGTGCATTCCTTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACCTCTACTATGAGAATGAGCAGTGTGTTTTGGCAAG
GAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTTGATCAATT
TTGTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATCCACCACGTCCGA
GACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCCCTCCTCCCCCTGTTGGGCATCACC
TACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCAGATTGTGTTTCATCTACTTCA
ACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGTTTTCTACTGCTTCTTCAATGGAGA
GGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGGGCAGGACCACCACGCCCTCCGGGTGCCT
GTGCGCCGGGCCATGTCCATCCCTACGTGCCCCACCAGGATCAGCTTCCACAGCATCAAGCAGA
CAGCTGCTGTGTGACCCTCTGTACCGTCTGCCCCGAGTCCACCCTGAGGCAGCTTCTCCAT
CCTTTACAGCCTTCCCCCTGGGTCTCCTTGCTACCCTGACCCACAGGTACAAGGTACAGGAGAA
GGGAGGAGAACGAACACTCCC (SEQ ID NO:1)

FIGURE 1

underlined = deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

GAATTCCGGGTGGGTAGGTCTGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGAC
CTCCTTTTGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGC
TGTCCTATGGGACAGCAGATCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCC
CTGCTTCCAGTGCTCCAGGTGGCCCAACCAGGCCAGGCACCCAGGACCAGCCCCTGTGG
ACACTTTTGGAGCAGTACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACC
TACTGCAACACGACCTTGGACCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCC
CTAGTAGAGAGACCGTGCCCCGAGTACTTCAATGGCATCAAGTACAACACGACCC [GGAA
TGCCTACAGAGAGTGCCTGGA] GAACGGGACCTGGGCCTCAAGGGTCAACTACTCACACT
GCGAACCCATTTGGATGACAAGCAGAGAAAGTATGACCTGCATTACCGAATCGCCCTCA
TTGTCAACTACCTGGGTCACTGTGTTTCCGTGGTGGCCCTGGTG [GCCGCTTTCCTGCTT
TTCCTAGTGCTGCG] GAGTATCCGCTGCCTGAGGAATGTGATCCACTGGAACCTCATCAC
CACCTTCATTCTGAGAAACATCGCGTGGTTCCTGCTGCAACTCATCGACCACGAAGTGCA
CGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTGTGGTCAC
CAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTCATGACGTA
CTCCACAGAGCACCTGCGCAAGTGGCTTTTCCCTCTTCAATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACCTACTATGAGAATGAGCAGTGTGTTTGG
CAAGGAAGCTGGTGATTGTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTT
GATCAATTTTCTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATC
CACCACGTCCGAGACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCTCTCTCCC
CCTGTTGGGCATCACCTACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCA
GATTGTGTTTCTACTTCAACTCTTTTCCCTGCAGTCCCTCCAGGGTTTCTTTGTGTCGGT
TTTCTACTGCTTCTTCAATGGAGAGGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGG
GCAGGACCACCACGCCCTCCGGGTGCCTGTGCGCGGGGCCATGTCCATCCCTACGTCGCC
CACCAGGATCAGCTTCCACAGCATCAAGCAGACAGCTGCTGTGTGACCTCTGTACCGT
CTGCCCCGAGTCCACCCTGAGGCAGCTTCTCCATCCTTTACAGCCTTCCCCTGGGTCC
TCCTTGCTACCTGACCCACAGGTACAAGGTACAGGAGAAGGGAGGAGAACGAACACTCC
C

FIGURE 2A

Gene Sequence Structure

441 bp

Sequence Deleted

582 bp

Size of full-length
cDNA: 1557 bp

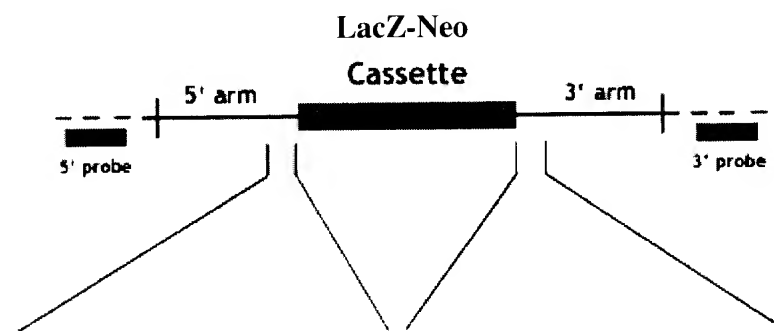
Targeting Vector* (genomic sequence)

Construct Number: 3050

Arm Length:

5': 3.1 kb

3': 2.5 kb



5'>AGCCCTATGTGTAATTTTCAT
ATAAATGACTCATATTAGCTTTCA
GATATGCATTGTGTTTCAGGTCT
GGGAGAACTAAGGAGTGTGGACCT
TATCCTGCAGGTACTAGGGAGCCA
GGGAGGGCTTTTGAGGCGGGAGGG
CGTCCTGACTCTCAGTGGTTGGCA
TCTTCTCTAGGGAATGCCTACAGA
GAGTGCCTGGA<3'
(SEQ ID NO:2)

5'>GCCGCTTTCCTGCTTTTCCTA
GTGCTGCGGTGAGTCCACCTCCAC
CCTGCTTCCCTCCTTGTCTTTGCCT
CTCCAGACATTGTCTCTTCCATT
CTGGGGCCCCGGGAACAGTAGCCA
GAAGTGGGTTTAAGTCAGACCCCC
AGGGCCATGACCACCAGCCTGCCT
GAAGGGTAGAGAGCAAGCCCAGCT
GGGACCACCAG<3'
(SEQ ID NO:3)

Targeting Vector

Endogenous Locus

* Not drawn to scale

FIGURE 2B